

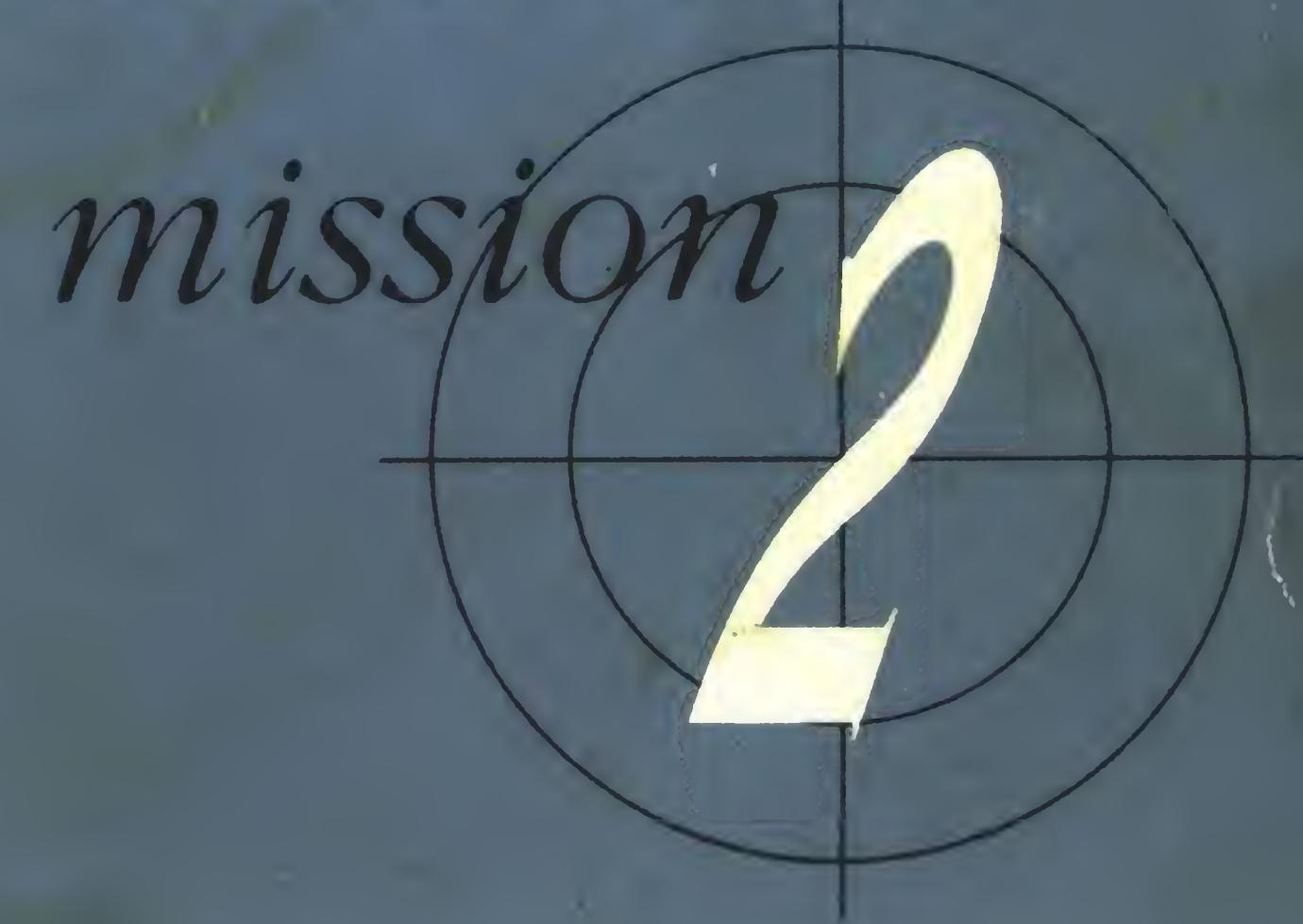


Spectrum HoloByte

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EmuMovies

FALCON



user manual

by Kati Hamza



Spectrum HoloByte

FALCON MISSION DISK 2

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INTRODUCTION

It was a while since I'd seen any action and I was itching to get back. It was a hot, muggy summer afternoon and I was sitting in the bar when the news report hit. "Today's bulletin from the war zone indicates that the action is escalating towards crisis point. Both sides are reinforcing ground troops and sources close to the military leadership suggest that the army may be preparing for a heavy assault." That's when I saw DJ coming towards me. He was mopping his face with a handkerchief and there were two dark patches of sweat under his arms. Even from that distance he looked pretty pleased with himself. "Finish that beer" he said. "We're moving out".

You're a crack F-16 fighter pilot, deployed to supplement the regular forces in a limited action trouble spot. The battle has reached flashpoint: inland there's a serious tank battle raging and the forces on the ground need all the help they can get. It's your job to ensure their numerical superiority by destroying enemy tanks and interrupting their supply lines.

Meanwhile reports are coming in that enemy MiG-27 bombers protected by MiG-21 fighters are targetting your supply installations and that Hind 24 helicopters are knocking out friendly tanks. If you continue with your bombing missions, there's a good chance they'll get through. If you throw all your energies into a defensive operation there's nothing to halt the advance of enemy tanks.

In war there are no easy answers. You'll have to compromise and you'll have to trust to your skill. By monitoring the situation carefully you should be able to analyse which threat or opportunity to act on first. Radar, messages from ground control plus regular updates on the state of ground forces should keep you in the picture. You know your objective; how you go about it is entirely up to you.

LOADING INSTRUCTIONS

The new mission disk replaces **Falcon** disk one. Insert the disk in the drive and switch on your computer. Follow the onscreen prompts and insert **Falcon** disk two when requested.

FLYING THE F-16 FALCON

Since your last flight in the F-16 Falcon, all the aircraft in your squadron have been upgraded to contain elements of the F-16C. This makes little difference to the handling or controls of the aircraft so experienced pilots need little retraining; a brief look at the Pilot's Memo which details equipment changes should be sufficient.

If you feel you're a little rusty on some of the points covered in basic training or you've never flown an F-16 before, you're advised to consult the original **Falcon** flight manual. It gives extensive information on everything you need to know about flying techniques and weapon implementation. Beginners are advised to pay special attention to **Part 1: Your First Flight in the Falcon** and practise the Milk Run mission before attempting any of the objectives on the Mission Disk.

PILOT'S MEMO

In accordance with US Air Force policy all F-16A Falcons in this squadron have been updated to contain elements of the F-16C. Your overhauled aircraft features the following improvements:

WEAPONS

AMRAAM - 120A Advanced Medium Range Air to Air Missile

The AMRAAM - 120A is a fire and forget air-to-air missile and replaces the AIM-9J Sidewinder. It is deployed in exactly the same way as the AIM-9M Sidewinder but has the advantage of enabling you to lock on and fire at a target at a range of 18 miles - long before any visual contact has been made. It is a Radar Guided Missile with inertial mid course guidance and active radar terminal homing. It's longer range permitting true Beyond Visual Range (BVR) engagements.

To use it, point the nose of the F-16 in the direction from which you expect the enemy to appear. If you've guessed correctly you should see a radar trace at 40 miles. Select the AMRAAM - 120A and a lock should be obtained at approximately 18 miles. For best effects, the enemy needs to be surprised; approach hostile formations from their six (rear).

Tactics

The AMRAAM - 120A's longer missile range has several advantages. It can be used to knock out one or two MiGs before close fighting starts, or to keep your distance and pick the enemy off one by one. As it's no longer necessary to get close to a MiG to destroy it, the longer range also makes it possible to protect several potential targets at once.

AGM-88A HARM Antiradiation Missile

The AGM-88 is particularly effective against SAM sites. Select it when a SAM appears on the threat indicator; if you are in range the lock light is illuminated. Now point the F-16 towards the threat (by making the blip on the threat indicator come round to the 12 o'clock position). A target box appears on the HUD which overlays the SAM site. When you are satisfied that the SAM is unfriendly press the trigger. The AGM homes in automatically.

Tactics

The AGM-88 is an automatic weapon which can be deployed well in advance, leaving you free to concentrate on defensive action nearer home. It's worth noting that if the weapon isn't registering any SAM sites, the enemy have turned their radar off (indicated by a lack of Blips on the RWR). This is a very strong indication that there may be a MiG around.

AIM-9M Sidewinder All Aspect Missile

The AIM-9L Sidewinder has been updated to the current Armed Forces standard, the AIM-9M. There are no significant operational details between the two missiles. To refresh your memory on the Sidewinder's features consult the section covering the AIM-9L in your **Falcon** flight manual.

OTHER EQUIPMENT

Advanced Self Protection Jammer

Your aircraft has been fitted with an internal ASPJ device, a permanent feature of the F-16C. It emits signals to jam enemy radar in exactly the same way as the ECM pod

when deployed on an unmodified F-16A. The advantage of an internal system of this type is that you can carry more weapons.

APG-68 Radar

The APG-66 radar has been replaced with the APG-68, the F-16C standard. It handles no differently from the earlier model but you will find it gives better performance and superior all-round capability. In Track While Scan mode it now has a range of 40 miles

CONTROLS

Rotate Key

There is now an extra rotate key. Press key 1 to rotate in the opposite direction from key 2.

Threat Indicator

The threat indicator now shows SAM sites in black and aircraft in white.

OPERATION BRIEFING

Objective: to maintain a significantly larger force of friendly tanks on the battlefield than the enemy. This is achieved by disrupting hostile supply lines and protecting friendly tanks and installations.

Mission Disk 2 contains 12 missions. Some are offensive and involve bombing enemy ground forces and targets, others are defensive and involve protecting your own supply lines. Any mission can be tackled at any time but as the progress of one mission has a tendency to affect the next it's best to confront them in order.

Remember that to win the game and receive the Medal of Honour, your primary aim is to gain numerical superiority.

This objective is paramount and is relatively independent of completing all the missions. Maintaining a balance between offensive and defensive tactics is essential. You may be awarded the Medal of Honour at any time before, during or after your final mission.

As this is a realistic simulation of a war situation, all enemy aircraft are engaged on their own attack missions. They won't come looking for you; you'll have to go in search of them. Never rush into a battle when you can attack from long-range instead and keep in mind that a flight of bombers is almost invariably protected by a fighter escort. Just because you can't see a MiG-21 doesn't mean that there isn't one around.

EXTRA AIRCRAFT

If you want to make your missions really tough, select the extra aircraft option by clicking on the area above "Armaments" on the mission select screen. On selecting this area a number of aircraft will appear denoting the selection. It prompts the enemy to send out a second set of aircraft bound on either offensive or defensive duties. You are duly informed of the second threat; it's entirely up to you whether you continue your original mission or opt to go on the defensive.

REFUELLING

To refuel and rearm in the middle of a mission, land on the friendly airfield at WP7 and press CTRL-X.

Additional information on external views

The player can gain information on the overall mission situation relating to ground forces.

Approaching - the number of tanks/supply vehicles about to arrive at their drop off point.

Reserve - the number of tanks/supply vehicles in reserve.

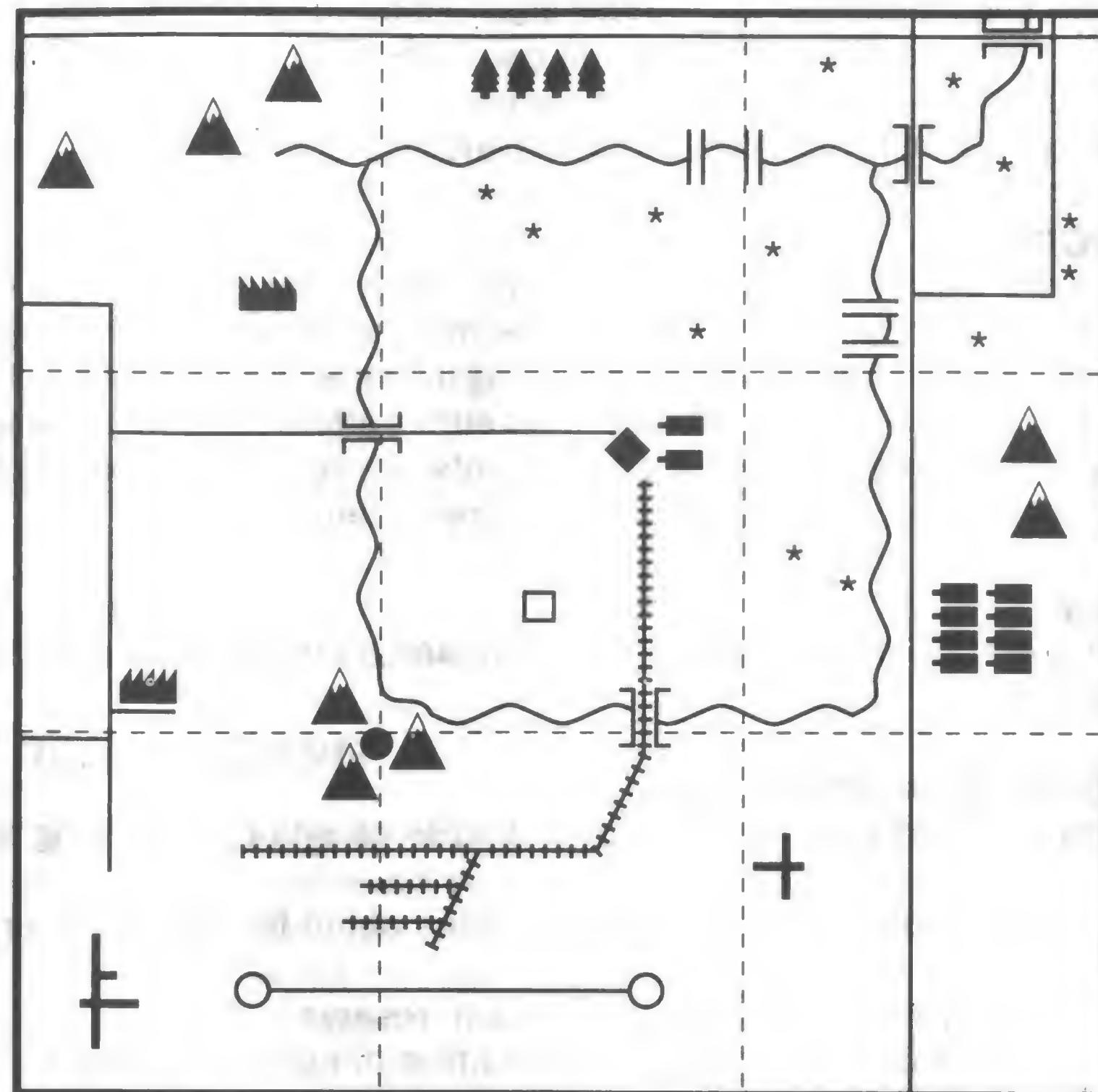
Near HQ - the number of tanks/supply vehicles that are over the pontoon bridges

In HQ Sector - the number of tanks that are in the HQ sector. Tanks are not visible in the HQ unless they arrived there within the current mission.

Enemy Aircraft

During a confrontation with enemy aircraft it is likely that they will eject chaff and flares in response to the release of a missile against them. This is only visible on 1 meg machines.

THE BATTLEGROUND



RIVER

MOUNTAIN

PONTOON BRIDGE

FOREST

MARSHALLING YARD

HQ

FACTORY

ROAD

OIL REFINERY

ENCAMPMENT

HOME BASE

SAM SITE

RUNWAY

BRIDGE

TANKS

RAILWAY

ARSENAL

BUILDING

THE MISSIONS

HEAVY METAL

Waypoint: WP1. South of pontoon bridge

Objective: Knock out two enemy tanks

Effective weapons: AGM-65B Maverick & Mk84 2000lb Bomb

Minimum Activity: A pair of Hinds

A decisive strike early on in the mission would put a severe damper on the enemy's morale and is sure to boost your squadron's confidence. Make sure you're certain of the approximate location of the two friendly tanks to the east of the airfield and don't mix them up with the enemy. As you head for the target keep an eye on your radar and be prepared to defend your tanks; it's just possible that the enemy may have had the same idea as you... Tanks have been colour coded - red for enemy, blue for friendly.

FIVE CARDER

Waypoint: WP8. Pontoon bridge.

Objective: Destroy four pontoon bridges.

Effective weapons: AGM-65B Maverick & Mk 84 2000lb Bomb

Minimum Activity: A pair of Hinds

Your Commander's had word that the enemy is expecting an important truck convoy in the next few days. Blow up those four bridges and you'll engineer a major delay. There have been reports of Hinds coming in to attack friendly tanks. Arm smart and

be prepared to intercept. If you get them with a couple AIM-120A's before they reach you, you'll have all the time in the world to score hits on the bridges.

HIND HIT

Waypoint: WP9, north of HQ sector
Objective: Intercept two Hind 24's
Effective weapons: AIM-120A Missile, AIM-9M Sidewinder & M61-A1 Gun
Minimum Activity: Three Hind 24's

You've had one too many successes just lately and the enemy is pretty mad. They've picked three of their best pilots to take a couple of Hinds into your own territory and wreak revenge. The designated targets are a couple of friendly tanks. Keep an eye on their locations and try to take out at least one of those Hinds before they approach.

LONE RANGER (and Tonto)

Waypoint: WP2, bridge
Objective: Destroy one MiG
Effective weapons: AIM-120A Missile, AIM-9M Sidewinder & M61-A1 Gun
Minimum Activity: Two MiG 21's

Two MiGs have managed to slip through the radar net and are heading straight for an unprotected train. Intercept and destroy before they make spaghetti with the tracks. Prepare for a one-on-one battle against one of the tough guys on the other side. Watch your instruments and don't rush into anything: these guy's are no pushover if they made it this far.

TRUCK INTERDICT

Waypoint: WP10, Bridge
Objective: Destroy 3 trucks
Effective weapons: AGM-65B Maverick & Mk84 2000lb Bomb
Minimum Activity: A pair of MiG 21's on CAP

A large enemy convoy has been sighted somewhere to the north, possibly near the bridge. Hit at least three trucks and you score big promotion points with your Commander. But don't rush blindly in to the kill; at least two MiGs are on CAP around here. It's one of the commonest Rookie mistakes to concentrate on one target and forget everything else. Make sure this is one mistake you don't make and take enough Sidewinders and AIM-120A's to take out any unexpected arrivals.

ACE HIGH

Waypoint: WP3, bridge
Objective: Intercept and destroy one MiG
Effective weapons: AIM-120A Missile, AIM-9M Sidewinder & M61-A1 Gun
Minimum Activity: A pair of MiG 21's

A big convoy of supplies is heading out to your pals on the ground and a pair of MiGs have been spotted approaching the trucks. Here's your chance to show your appreciation of what the tank platoons have been doing. Intercept and destroy at least one MiG and make sure that convoy gets through. Remember that there are two MiGs and there's nobody to cover your six. Approach with extreme caution; better still knock one out at long-range before they get close.

TANK PARK

Waypoint:	WP11, ENE of friendly airstrip
Objective:	Hit five tanks
Effective weapons:	AGM-65B Maverick & Mk84 2000lb Bomb
Minimum Activity:	A MiG 21 on CAP

Reports are coming in that a concentration of tanks has been reported to the NE of the forward airfield. Just when you thought you were due for some rest your Commander goes and picks you for the mission. Being tired is no excuse. Don't let the thought of a big kill on the ground put you off watching the skies or listening for radio reports. Prepare for a confrontation with one mightily protective MiG.

TRIPLE TROUBLE

Waypoint:	WP4, Marshalling Yard
Objective:	Destroy two MiGs
Effective weapons:	AIM-120A Missile, AIM-9M Sidewinder & M61-A1 Gun
Minimum Activity:	A pair of MiG 27's with a MiG 21 on escort duty

You've been scoring some important hits in the last few days but that's not enough to keep the enemy down. If they can put out a couple of your key installations you'll have lost your advantage and they'll have a chance to recover. With this in mind two MiG-27s are intending to work over the marshalling yard, POL depot and oil refinery and there's an escorting MiG-21 on top cover. There's one of you against three of them so try to pick one off with an AIM-120A before they arrive. Don't be afraid to use your Afterburner even though it's heavy on gas. Fuel may be gold but you can't use it up when you're dead.

DRAGON'S HEAD

Waypoint:	WP12, bridge
Objective:	Damage the enemy supply line
Effective weapons:	Mk84 2000lb Bomb
Minimum Activity:	A pair of MiG 21's on CAP

Your squadron's been trying to make a dent in the enemy supply line for a couple of weeks but so far you haven't had too much luck. If you can hit the Dragon's Head you won't do too much damage but if you burn the Tail as well you've broken the line. This is one half of an interdiction mission and it only works if you complete Mission Dragon Tail as well. So far this bridge has been a pretty elusive target but don't become obsessed with going after it. There are two MiGs around here only too happy to take advantage of your thoughtlessness; make sure they don't get the chance to close.

INTERCEPTOR

Waypoint:	WP5, arsenal
Objective:	Splash one MiG-27 and protect the Arsenal
Effective weapons:	AIM-120A Missile, AIM-9M Sidewinder & M61-A1 Gun
Minimum Activity:	A pair of MiG 27's with a MiG 21 on escort duty

Two MiG-27s plus one MiG-21 on high cover are planning a strike on a vital friendly arsenal and this is one firework display you don't want to see. Splash at least one MiG-27 and make sure the arsenal remains intact; take plenty of Sidewinders and approach with care. All enemy planes are valuable equipment: shoot a couple down and you've made your own personal hole in enemy supplies.

DRAGON'S TAIL

Waypoint: WP13, bridge
Objective: Damage the bridge
Effective weapons: AGM-65B Maverick & Mk84 2000lb Bomb

Minimum Activity: A pair of MiG 21's on CAP

In a war situation you have to keep your head. Sometimes it pays to offload all the bombs you have on every visible target and sometimes it pays to wait. A couple of missions ago you managed to hit the Dragon's Head. Get the Tail and you've achieved more with one accurate hit than by bombing five tanks. Take Sidewinders and AIM-120A's Missiles. A vital strategic target like that is bound to be protected by at least a couple of MiGs. If you get a MiG as well as a bridge the boys back at HQ buy you a drink.

HOME BASE

Waypoint: WP6, Marshalling Yard
Objective: Destroy one MiG 27
Effective weapons: AIM-120A Missile, AIM-9M Sidewinder & M61-A1 Gun
Minimum Activity: A pair of MiG 21's on CAP

HQ is on red alert. This is a critical situation: one MiG-27 on strike and two MiG-21s on escort are approaching Home Base. You need to muster all your resources to take out the MiG-27. This is one situation where there's absolutely no point in holding back. If he gets through that's the end of the operation as far as you're concerned so let him have it and make sure you get rid of the escort before the escort gets you.

DECORATIONS

RIBBONS

A ribbon is awarded for every mission successfully completed. Each mission is worth a specific number of merits as follows:

Heavy Metal	1	Five Carder	2
Hind Hit	2	Lone Ranger	3
Truck Interdict	4	Ace High	6
Tank Park	10	Triple Trouble	10
Dragon's Head	12	Interceptor	12
Dragon's Tail	15	Home Base	15

Extra points are scored for hitting additional targets and executing safe landings as described in the **Falcon** flight manual.

If the enemy is successful in its mission you will not be awarded a ribbon even if you complete the mission

MEDALS

Exceptional acts of heroism are rewarded with a medal.

PURPLE HEART

Injured in action.

DISTINGUISHED FLYING CROSS

Fly at Captain rank and:

1. Achieve a position of decisive tank superiority over the enemy.
2. Successfully complete a mission which scores more than 3 points with the extra aircraft option switched on.
3. Successfully complete a mission worth more than 3 points and destroy two enemy aircraft.

SILVER STAR

Fly at Major rank or higher and:

1. Successfully complete a mission worth more than 6 points and destroy enemy aircraft.
2. Destroy four or more enemy aircraft.

AIR FORCE CROSS

Achieve the same objectives as for Silver Star, but at Lieutenant Colonel or Colonel levels.

MEDAL OF HONOUR

Fly at Major rank or higher and achieve a position of decisive superiority on the battlefield.

AIRCRAFT SPECIFICATIONS

F-16C FALCON

The F-16 became operational in January 1979 and has upheld its reputation for manoeuvrability ever since. It was originally the product of a reaction against the spiralling costs and size of new fighters like the F-15. Designed to be built easily and in affordable quantities it was nevertheless intended to outdo the opposition (MiG-21s) by virtue of its technical versatility.

What finally came off the production line proved to be one of the most successful dogfighters of all time; it's also one of the most forgiving to fly thanks to fly-by-wire controls. The Falcon is stressed to perform a sustained 9g turn which gives its pilots a slight advantage in a defensive situation: fractional superiority in a dogfight is enough to mean the difference between life and death.

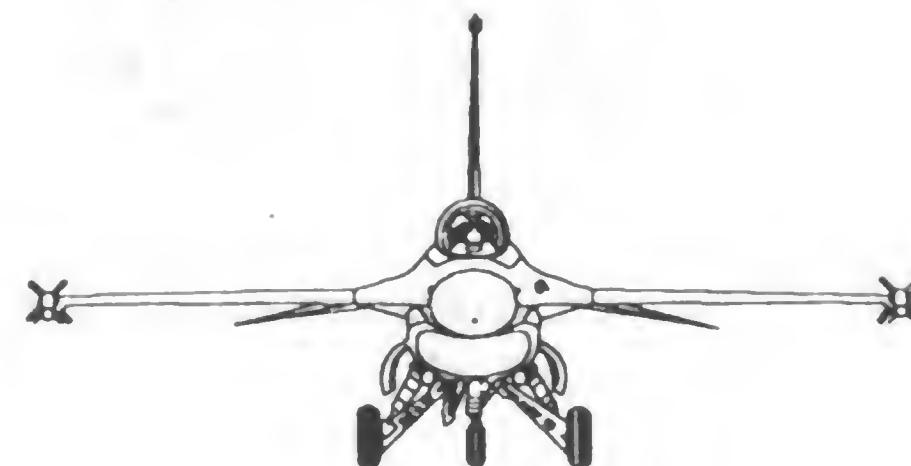
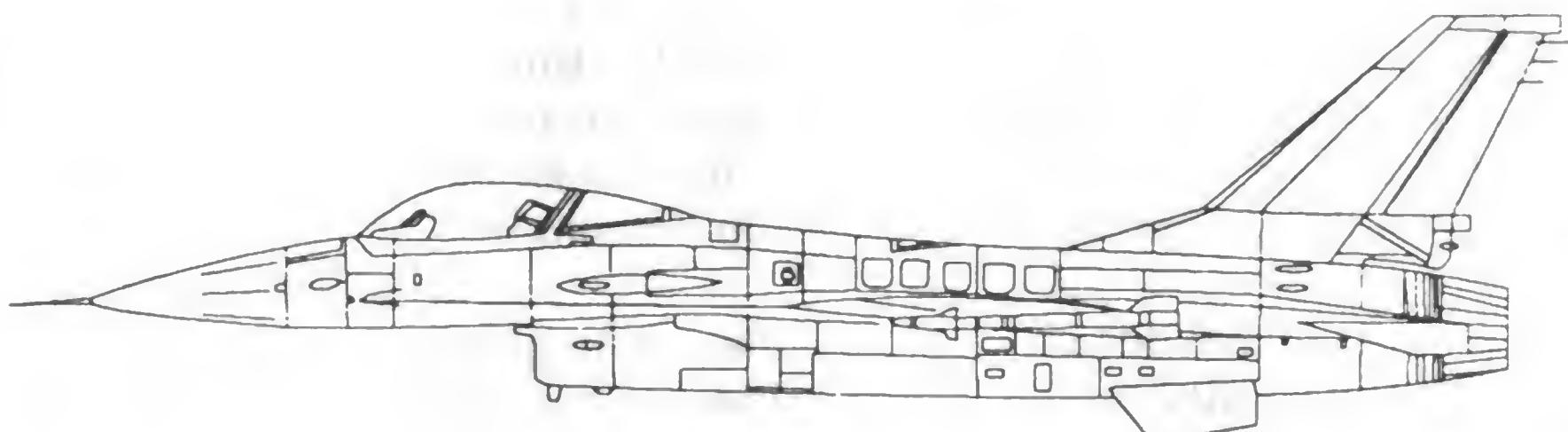
Variations on the original design F-16A include a downgraded F-16/79, the F-16B 2 seater/trainer, the F-16D 2 seater/trainer variant of the F-16C, the F-16E, optimised for ground attack and the new F-16XL or F-16F, a tailless delta capable of carrying a colossal amount of fuel and particularly suited to ground attacks. All have the distinctive high set, all round vision cockpit. The F-16C, the standard to which your aircraft has been upgraded, features improved avionics, a more capable APG-68 radar and a more powerful engine. Not to mention a larger and more varied weapon load.

The F-16 has been exported to various overseas countries including Belgium, Denmark, Egypt, Israel and Venezuela.

SPECIFICATIONS

Engine: General Electric F110 100 GE or Pratt & Whitney F100 PW 220
Length: 49ft 4in
Wingspan: 31ft

Height: 16ft 8in
Weights: Empty 14567lb; Normal Take-Off 23300lb; Maximum Take-Off 35400lb.
Max Speed: 795kt (1.2M) at low altitude; 1172kt (M2.05) at 40000ft
Ceiling: 55000ft
Sensors: Hughes APG-68 coherent pulse doppler look/shoot down radar, Advanced Radar Warning Receiver
Armament: Two wingtip missiles rails, three underwing hardpoints on each side and one centre line hardpoint, one 30mm canon.



F-16A FALCON

Mi-24 (Nato designation - Hind)

Better known by its Nato reporting name of 'Hind' the Mi-24 dates back to the late 1960s when the Mil design bureau proposed it as a specialised escort and anti-tank gunship helicopter on a par with the American Bell AH-1 Cobra and the ultimately unsuccessful AH-56 Cheyenne.

The Soviet Defence Ministry wanted an assault troop capability incorporated so when the first prototypes were produced around 1971, a cabin capable of carrying eight armed soldiers was added. The Mi-24 reflects the basic dynamics of the earlier Mi-8 but comes with the addition of an extensively glazed cockpit, shoulder-mounted stub-wings and a variety of weaponry for anti-armour and fire suppression.

It's primarily designed for strike missions but can also be used to ferry small numbers of troops into combat, transport smaller numbers on stretchers out of combat or transport vital cargo into a battle zone. It's reliably well-protected and has featured in most Warsaw Pact armies though some are beginning to replace it with the M-28 (Havoc).

Hinds have been exported to Algeria, Iraq, Libya and Cuba and were operated by Soviet forces in Afghanistan.

SPECIFICATIONS

Engine: Two 2,200shp Isotov TV3-117 Turboshafts
Length: 68 ft 11 in (with rotors)
Height: 21 ft 4 in (with rotors)
Rotor diameter: 55ft 9 in (estimated)
Weights: Empty: 18000lb; Normal Take-Off 24000lb
Ceiling: 14750 ft
Armament: 1 machine gun, 4 anti-tank missiles and rockets; weapon load: 2810 lb.
Performance: Max speed 200mph; cruising speed 183 mph; maximum rate of climb 2953ft/min; combat radius up to 600 miles.

MiG-27

The MiG-27 went into a production a year or two later than the MiG-23 interceptor but is based on the same TsAGI-developed aerodynamic shape. Unlike the MiG-23 though often described as a dual role Fighter/Ground Attack aircraft, the MiG 27 is primarily used in a Ground Attack role.

Special features include revised stressing for increased weight capabilities, a forward fuselage ("ducknose") with a broad flat downsloping profile ahead of the cockpit containing various air/ground sensors, and thick armour side panels. It comes complete with a forward-emitting ECM jammer and a missile guidance system. Its primary drawback is that it has next to no bad weather capability.

Its main advantage is the cost. As the MiG-23/27 family has one of the largest production runs of any aircraft world-wide it's far cheaper than any rival western aircraft to produce.

Engine: One Tumansii R-29 series augmented turbofan with maximum after burning thrust of 25353lb

Length: 55ft 5in

Wingspan: 46ft 9in

Height: 14ft 4in

Weight: Empty 22000lb; Maximum take-off 44,310 lb

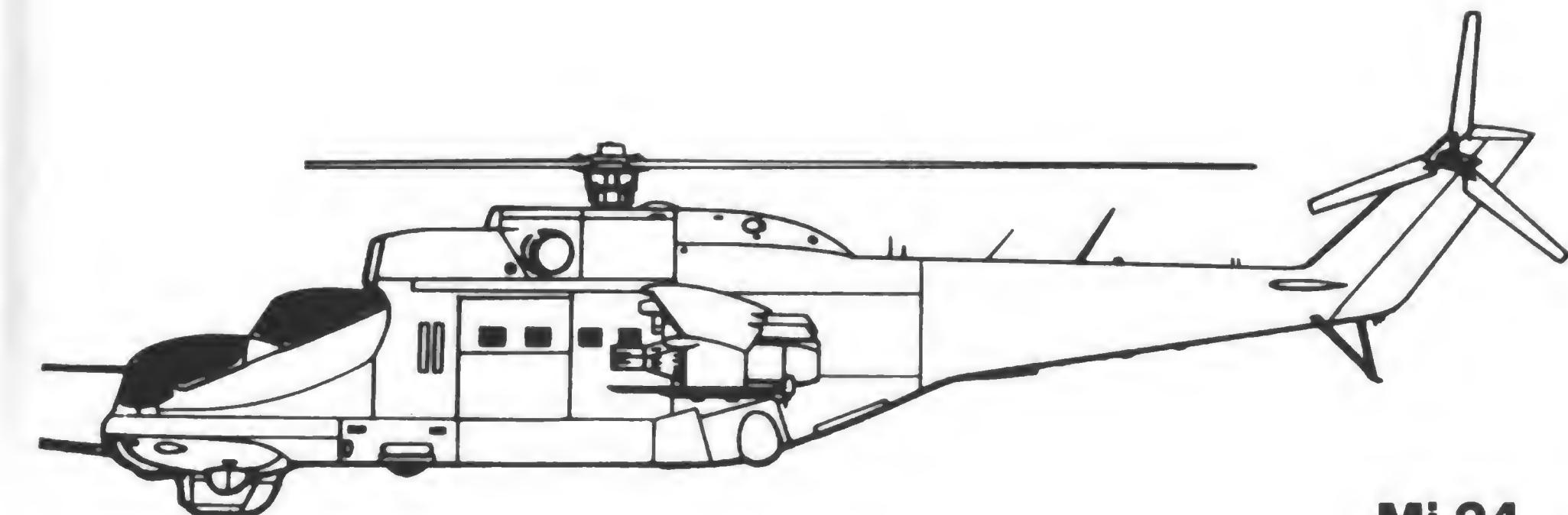
Max speed: Low altitude Mach 1.1; high altitude 1050mph (1.6M)

Ceiling: 50000ft

Sensors: NI-50BM nose mounted doppler radar with terrain avoidance facility plus a missile guidance radar RV-5 radio altimeter

Armament: One centreline 23mm six-barrel gun, bomblod of 6614lb

MiG-27



Mi-24

Mirrortsoft are constantly seeking game designers, artists, programmers and writers. If you think your skills are equal to the demands of Britain's leading 16-bit software company, contact Graeme Boxall on: 071 928 1454.